Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

<u>Listing of Claims:</u>

1. (Canceled).

2. (Previously presented) The system of claim 29, wherein the top-level domain name is a non-standard top-level domain name.

3. (Original) The system of claim 2, wherein the non-standard top-level domain name is one of .scom, .sorg, .snet, .sgov, .sedu, .smil and .sint.

4. (Previously presented) The system of claim 28, wherein the communication network includes the Internet.

5. (Previously presented) The system of claim 28, wherein the domain name service system comprises an edge router.

6. (Previously presented) The system of claim 29, wherein the domain name service system is configured to authenticate the query using a cryptographic technique.

7. (Previously presented) The system of claim 28, wherein the domain name service system is connectable to a virtual private network through the communication network.

8. (Previously presented) The system of claim 7, wherein the virtual private network is one of a plurality of secure communication links in a hierarchy of secure communication links.

9. (Previously presented) The system of claim 7, wherein the virtual private network is based on inserting into each data packet communicated over a secure communication link one or more data values that vary according to a pseudo-random sequence.

10. (Previously presented) The system of claim 7, wherein the virtual private network is based on a network address hopping regime that is used to pseudorandomly change network addresses in packets transmitted between a first device and a second device.

11. (Previously presented) The system of claim 7, wherein the virtual private network is based on comparing a value in each data packet transmitted between a first device and a second device to a moving window of valid values.

12. (Previously presented) The system of claim 7, wherein the virtual private network is based on a comparison of a discriminator field in a header of each data packet to a table of valid discriminator fields maintained for a first device.

13. (Withdrawn) A method for registering a secure domain name, comprising steps of:
receiving a request for registering a secure domain name;
verifying ownership information for an equivalent non-secure domain name corresponding to the secure domain name;
registering the secure domain name in a secure domain name service when the ownership information for the equivalent non-secure domain name is consistent with ownership information for the secure domain name.

14. (Withdrawn) The method according to claim 13, wherein the step of verifying ownership information includes steps of:
determining whether the equivalent non-secure domain name corresponding to the secure domain name has been registered in a non-secure domain name service; and

querying whether the equivalent non-secure domain name should be registered in the nonsecure domain name service when the equivalent non-secure domain name has not been registered in the non-secure domain name service.

15. (Withdrawn) A computer-readable storage medium, comprising:

a storage area; and computer-readable instructions for a method for registering a secure domain name, the method comprising steps of:

receiving a request for registering a secure domain name;

verifying ownership information for an equivalent non-secure domain name corresponding to the secure domain name; and

registering the secure domain name in a secure domain name service when the ownership information for the equivalent non-secure domain name is consistent with ownership information for the secure domain name.

16. (Withdrawn) The computer-readable medium according to claim 15, wherein the step of verifying ownership information includes steps of:

determining whether the equivalent non-secure domain name corresponding to the secure domain name has been registered in a non-secure domain name service; and

querying whether the equivalent non-secure domain name should be registered in the non-secure domain name service when the equivalent non-secure domain name has not been registered in the non-secure domain name service.

17. (Withdrawn) A method for registering a domain name, comprising steps of:

(i) receiving a request for registering a first domain name;

(ii) verifying ownership information for a second domain name corresponding to the first domain name; and

(iii) registering the first domain name when the ownership information for the second domain name is consistent with ownership information for the first domain name.

18. (Withdrawn) The method of claim 17, wherein the first domain name comprises a nonstandard top-level domain and the second domain name comprises a standard top-level domain.

19. (Withdrawn) The method of claim 17, further comprising the step of storing information corresponding to the registration performed in step (iii) in a database separate from a database storing information for standard domain name registrations.

20. (Withdrawn) The method according to claim 17, wherein the step of verifying ownership information includes steps of:

(a) determining whether the second domain name has been registered in a domain name service; and

(b) querying whether the second domain name should be registered in the domain name service when the second domain name has not been registered in the domain name service.

21. (Withdrawn) A computer-readable medium, comprising computer-readable instructions for a method for registering a domain name, the method comprising steps of:

(i) receiving a request for registering a first domain name;

(ii) verifying ownership information for a second domain name corresponding to the first domain name; and

(iii) registering the first domain name when the ownership information for the second domain name is consistent with ownership information for the first domain name.

22. (Withdrawn) The computer readable medium of claim 21, wherein the first domain name comprises a non-standard top-level domain and the second domain name comprises a standard top level domain.

23. (Withdrawn) The computer-readable medium of claim 21, wherein the step of verifying ownership information includes steps of:

(a) determining whether the second domain name has been registered in a domain name service; and

(b) querying whether the second domain name should be registered in the domain name service when the second domain name has not been registered in the domain name service.

24. (Withdrawn) The method of claim 13, wherein the secure domain name has a top-level domain reserved for secure network connections.

25. (Withdrawn) The computer-readable storage medium of claim 15, wherein the secure domain name has a top-level domain reserved for secure network connections.

26. (Canceled).

27. (Canceled).

28. (Previously presented) A system for providing a domain name service for establishing a secure communication link, the system comprising:

a domain name service system configured to be connected to a communication network, to store a plurality of domain names and corresponding network addresses, to receive a query for a network address, and to comprise an indication that the domain name service system supports establishing a secure communication link.

29. (Previously presented) The system of claim 28, wherein at least one of the plurality of domain names comprises a top-level domain name.

30. (Previously presented) The system of claim 28, wherein the domain name service system is configured to respond to the query for the network address.

31. (Previously presented) The system of claim 28, wherein the domain name service system is configured to provide, in response to the query, the network address

corresponding to a domain name from the plurality of domain names and the corresponding network addresses.

32. (Previously presented) The system of claim 28, wherein the domain name service system is configured to receive the query initiated from a first location, the query requesting the network address associated with a domain name, wherein the domain name service system is configured to provide the network address associated with a second location, and wherein the domain name service system is configured to support establishing a secure communication link between the first location and the second location.

33. (Previously presented) The system of claim 28, wherein the domain name service system is connected to a communication network, stores a plurality of domain names and corresponding network addresses, and comprises an indication that the domain name service system supports establishing a secure communication link.

34. (Previously presented) The system of claim 28, wherein at least one of the plurality of domain names is reserved for secure communication links.

35. (Previously presented) The system of claim 28, wherein the domain name service system comprises a server.

36. (Previously presented) The system of claim 35, wherein the domain name service system further comprises a domain name database, and wherein the domain name database stores the plurality of domain names and the corresponding network addresses.

37. (Previously presented) The system of claim 28, wherein the domain name service system comprises a server, wherein the server comprises a domain name database, and wherein the domain name database stores the plurality of domain names and the corresponding network addresses.

38. (Previously presented) The system of claim 28, wherein the domain name service system is configured to store the corresponding network addresses for use in establishing secure communication links.

39. (Previously presented) The system of claim 28, wherein the domain name service system is configured to authenticate the query for the network address.

40. (Previously presented) The system of claim 28, wherein at least one of the plurality of domain names comprises an indication that the domain name service system supports establishing a secure communication link.

41. (Previously presented) The system of claim 28, wherein at least one of the plurality of domain names comprises a secure name.

42. (Previously presented) The system of claim 28, wherein at least one of the plurality of domain names enables establishment of a secure communication link.

43. (Previously presented) The system of claim 28, wherein the domain name service system is configured to enable establishment of a secure communication link between a first location and a second location transparently to a user at the first location.

44. (Previously presented) The system of claim 28, wherein the secure communication link uses encryption.

45. (Previously presented) The system of claim 28, wherein the secure communication link is capable of supporting a plurality of services.

46. (Previously presented) The system of claim 45, wherein the plurality of services comprises a plurality of communication protocols, a plurality of application programs, multiple sessions, or a combination thereof.

47. (Previously presented) The system of claim 46, wherein the plurality of application programs comprises items selected from a group consisting of the following: video conferencing, e-mail, a word processing program, and telephony.

48. (Previously presented) The system of claim 45, wherein the plurality of services comprises audio, video, or a combination thereof.

49. (Previously presented) The system of claim 28, wherein the domain name service system is configured to enable establishment of a secure communication link between a first location and a second location.

50. (Previously presented) The system of claim 49, wherein the query is initiated from the first location, wherein the second location comprises a computer, and wherein the network address is an address associated with the computer.

51. (Previously presented) The system of claim 28, wherein the domain name service system comprises a domain name database connected to a communication network and storing a plurality of domain names and corresponding network addresses for communication,

wherein the domain name database is configured so as to provide a network address corresponding to a domain name in response to a query in order to establish a secure communication link.

52. (Previously presented) A machine-readable medium comprising instructions executable in a domain name service system, the instructions comprising code for:

connecting the domain name service system to a communication network;

storing a plurality of domain names and corresponding network addresses;

receiving a query for a network address; and

supporting an indication that the domain name service system supports establishing a secure communication link.

53. (Previously presented) A method of providing a domain name service for establishing a secure communication link, the method comprising:

connecting a domain name service system to a communication network, the domain name service system comprising an indication that the domain name service system supports establishing a secure communication link;

storing a plurality of domain names and corresponding network addresses; and

receiving a query for a network address for communication.

54. (New) The machine-readable medium of claim 52, wherein the instructions comprise code for storing the plurality of domain names and corresponding network addresses including at least one top-level domain name.

55. (New) The machine-readable medium of claim 52, wherein the instructions comprise code for responding to the query for the network address.

56. (New) The machine-readable medium of claim 52, wherein the instructions comprise code for providing, in response to the query, the network address corresponding to a domain name from the plurality of domain names and the corresponding network addresses.

57. (New) The machine-readable medium of claim 52, wherein the instructions comprise code for receiving the query for a network address associated with a domain name and initiated from a first location, and providing a network address associated with a second location, and establishing a secure communication link between the first location and the second location.

58. (New) The machine-readable medium of claim 52, wherein the instructions comprise code for indicating that the domain name service system supports the establishment of a secure communication link.

59. (New) The machine-readable medium of claim 52, wherein the instructions comprise code for reserving at least one of the plurality of domain names for secure communication links.

60. (New) The machine-readable medium of claim 52, wherein the code resides on a server.

61. (New) The machine-readable medium of claim 52, wherein the instructions comprise code for storing a plurality of domain names and corresponding network addresses so as to define a domain name database.

62. (New) The machine-readable medium of claim 52, wherein the code resides on a server, and the instructions comprise code for creating a domain name database configured to store the plurality of domain names and the corresponding network addresses.

63. (New) The machine-readable medium of claim 52, wherein the instructions comprise code for storing the corresponding network addresses for use in establishing secure communication links.

64. (New) The machine-readable medium of claim 52, wherein the instructions comprise code for authenticating the query for the network address.

65. (New) The machine-readable medium of claim 52, wherein at least one of the plurality of domain names includes an indication that the domain name service system supports the establishment of a secure communication link.

66. (New) The machine-readable medium of claim 52, wherein at least one of the plurality of domain names includes a secure name.

67. (New) The machine-readable medium of claim 52, wherein at least one of the plurality of domain names is configured so as to enable establishment of a secure communication link.

68. (New) The machine-readable medium of claim 52, wherein the domain name service system is configured to enable establishment of a secure communication link between a first location and a second location transparently to a user at the first location.

69. (New) The machine-readable medium of claim 52, wherein the secure communication link uses encryption.

70. (New) The machine-readable medium of claim 52, wherein the secure communication link is capable of supporting a plurality of services.

71. (New) The machine-readable medium of claim 70, wherein the plurality of services comprises a plurality of communication protocols, a plurality of application programs, multiple sessions, or a combination thereof.

72. (New) The machine-readable medium of claim 71, wherein the plurality of application programs comprises items selected from a group consisting of the following: video conferencing, e-mail, a word processing program, and telephony.

73. (New) The machine-readable medium of claim 70, wherein the plurality of services comprises audio, video, or a combination thereof.

74. (New) The machine-readable medium of claim 52, wherein the domain name service system is configured to enable establishment of a secure communication link between a first location and a second location.

75. (New) The machine-readable medium of claim 74, wherein the instructions include code for receiving a query initiated from the first location, wherein the second

location comprises a computer, and wherein the network address is an address associated with the computer.

76. (New) The machine-readable medium of claim 52, wherein the domain name service system comprises a domain name database connected to a communication network and storing a plurality of domain names and corresponding network addresses for communication,

wherein the domain name database is configured so as to provide a network address corresponding to a domain name in response to the query in order to establish a secure communication link.